Site: Oats/Rye					**Overall Confidence Rating: M**			
Background: 4,500,000 to 5,000,000 acres of oats and 1,500,000 acres of rye are planted annually [4]. OP's represent 70% of the 30,000 to 35,000 acres of oats and rye treated with insecticides annually [5].								
Organophosphate	% Treated		# Applications		Rate (lb AI/A)		PHI (days)	
Pesticides	Max[1]	Avg[1]	Max	Avg[1]	Max	Avg	Min	Avg
Azinphos-Methyl	<1.0	<1.0	1.0[2]	NS	0.5[2]		30[2]	--
Disulfoton	4.0	<1.0	1.0[3]	1.0	0.75[3]	0.4[1]	60[2]	--
Malathion	<1.0	<1.0	NS	1.0	1.26[2]	1.0[1]	7[3]	--
Methyl Parathion	<1.0	<1.0	NS	NS	1.25[2]	0.5 - 0.75[3]	15[3]	--

Confidence Rating: H= high confidence = data from several confirming sources; confirmed by personal experience
M = medium confidence = data from only a few sources; may be some conflicting or unconfirmed info.
L = low confidence = data from only one unconfirmed source

Organophosphate Target Pests for Oats/Rye(5) (Primary pests controlled by the OP's)	
Major	
Moderate	Aphids, Armyworms, Grasshoppers
Minor	Fleahoppers, Cereal Leaf Beetles, Leafhoppers

Major = 20+% of all OP usage on pest and >2% of total acres planted; Moderate = 5-20% of all OP usage on pest; Minor =<5% of all OP usage on pest

Sources:

[1] QUA Reports
[2] Luis reports
[3] State Recommendations
North Dakota Field Crop Insect Management Guide 1997
Insect Control for South Dakota Small Grain, 1997
1997 Field Crops Pest Management in Wisconsin
1997 North Carolina Agricultural Chemicals Manual
1997 Georgia Pest Control Handbook
[4] Agricultural Statistics 1997
[5] US proprietary market share information 1994-1996

Date:6/11/98

Site: Oats/Rye
Region:National

Pest[1]	Organophosphate[1]	Efficacy	Mkt[1]		Class	Alt. Pesticide List[1]	Efficacy	Mkt[1]	Constraints of Alternatives
Timing: Foliar[2]									
Aphids (moderate)	Disulfoton		High		C	Carbofuran[2]		Lo	Most products that contain Carbaryl are not labeled for use on either oats or rye. It's high market share may be due to the relatively low overall use of insecticides on oats and rye[2]. Carbofuran should be applied before head emerges[2].
	Malathion		Lo		C	Methomyl[2]		Lo	
	Methyl Parathion(2)		Lo						
Armyworm (moderate)	Methyl Parathion		High		C	Carbaryl		High	Most products that contain Carbaryl are not labeled for use on either oats or rye. It's high market share may be due to the relatively low overall use of insecticides on oats and rye[2]
	Malathion[2]		Lo		C	Methomyl[2]		Lo	
Grass-hoppers (moderate)	Methyl Parathion		High		C	Carbaryl		Med	Most products that contain Carbaryl are not labeled for use on either oats or rye. It's high market share may be due to the relatively low overall use of insecticides on oats and rye[2] Carbofuran should be applied before head emerges[2].
	Malathion[2]		Lo		C	Carbofuran[2]		Lo	
Fleahopper (minor)	Disulfoton		High						
Cereal Leaf Beetles (minor)	Malathion		High		C	Carbaryl		High	Most products that contain Carbaryl are not labeled for use on either oats or rye. It's high market share may be due to the relatively low overall use of insecticides on oats and rye[2]
	Azinphos-Methyl		Med		C	Carbofuran		High	
					C	Methomyl[2]		Lo	

ADDITIONAL INFORMATION:

Disulfoton and Carbofuran are not registered for use on Rye

Pest Importance: Major = 20+% of all OP usage on pest and >2% of total acres planted; Moderate = 5-20% of all OP usage on pest; Minor = <5% of all OP usage on pest
Efficacy Rating: Excellent = ☺ Good = ❍ Fair = ●
Market Share: High = use of OP represents 20+% of all insecticide usage on pest; Med = 5-20% of all usage on pest; Lo = <5% of all usage on pest
Insecticides: C = Carbamates; P = Pyrethroids; CH = Chlorinated Hydrocarbons; IGR = Insect Growth Regulators; B = Biological; O = Other pesticides

Site: Oats/Rye
Region:National

SOURCES:

[1] US EPA proprietary market share information 1994-1996
[2] State Recommendations
North Dakota Field Crop Insect Management Guide 1997
Insect Control for South Dakota Small Grain, 1997
1997 Field Crops Pest Management in Wisconsin
1997 North Carolina Agricultural Chemicals Manual
1997 Georgia Pest Control Handbook

Date:6/1/98